

ELVANOL® 85-82

POLYVINYL ALCOHOL

DESCRIPTION

Elvanol® 85-82 is a unique, medium viscosity, copolymer grade of polyvinyl alcohol. Its unique structure imparts improved viscosity stability and gel resistance to aqueous solutions while maintaining excellent film properties and adhesive strength typical of fully hydrolyzed grades.

Typical Properties of Elvanol® 85-82

Viscosity, cps ¹	24.0-32.0
Solution, pH	5.0-7.0
Volatiles, wt. % max.	5.0
Ash, wt. % max. ²	--
Residual Methanol, wt. % max. ³	<0.99

¹ Viscosity in mPa.s (cP) of a 4% solids aqueous solution at 20°C (68°F)

² Dry basis, calculated as % Na₂O

³ As manufactured

RESIN CHARACTERISTICS

As illustrated in the table below, solutions of Elvanol® 85-82 have less tendency to increase in viscosity on storage than solutions of other grades. Solutions of Elvanol® 85-82 are also more resistant to temperature changes. They show less tendency to develop gel structure on storage below room temperature or during extended storage, even at higher solids concentrations.

Viscosity Room Temperature, mPa.s (cP)

	1 day	10 days
12% Elvanol® 85-82	2535	2665
12% regular, medium viscosity fully hydrolyzed PVA	2475	3200

SUGGESTED USES

Elvanol® 85-82 is suggested for evaluation wherever the high film strength and oil, grease and solvent resistance associated with fully hydrolyzed polyvinyl alcohol are required but gel resistance is needed. The viscosity stability and gel resistance make it attractive for use in wet adhesives that must withstand temperature variations in shipment. Improved storage stability is possible for compounded adhesives containing Elvanol® 85-82.

FDA STATUS

Elvanol® 85-82 polyvinyl alcohol complies with U.S. Food and Drug Administration (FDA) Regulations under the following Section of Title 21 CFR, and may be used in contact with food, subject to the limitations and requirements therein:

- 175.105 - Adhesives

SAFETY & HANDLING

Read and understand the Materials Safety Data Sheet (MSDS) before using this product. Elvanol® 85-82 is technical quality polyvinyl alcohol. It is not recommended for inclusion in any food or preparation that might be taken internally.

Under certain conditions of use, dust may be formed from Elvanol® polyvinyl alcohol. Kuraray recommends that dust from Elvanol® be treated as a nuisance dust, which is regulated by the Occupational Safety and Health Administration (OSHA) under Title 29, Code of Federal Regulations, Section 1910.1000. Under this section, an employee's exposure to nuisance dust shall be limited to 15 milligrams per cubic meter (mg/m³) of total dust and 5 mg/m³ of respirable dust on a time-weighted average in any 8-hour shift of a 40-hour week.

ELVANOL® 85-82 POLYVINYL ALCOHOL

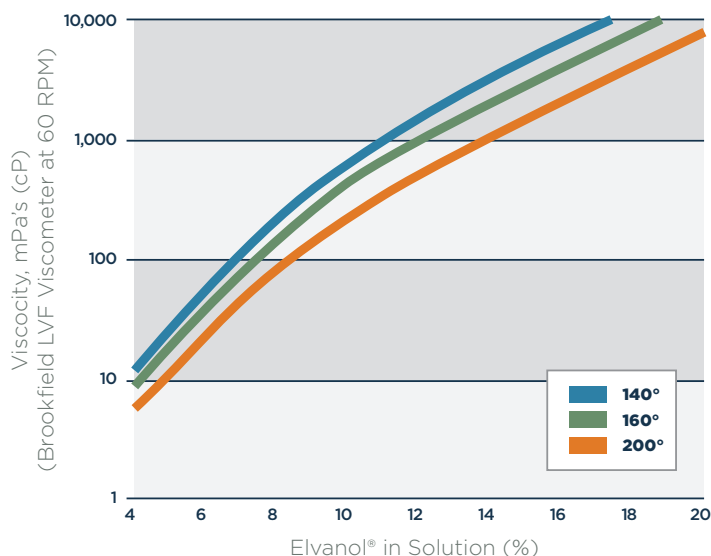
SAFETY & HANDLING (CONT.)

The Kuraray limit for polyvinyl alcohol exposure to nuisance dust is 10 mg/m³, and for respirable dust is 5 mg/m³. If excessive concentrations of dust are encountered, a mask or respirator and goggles should be worn. The mask or respirator should comply with Section 1910.134 of the OSHA regulations; the goggles should comply with Section 1910.133.

For bulk storage and handling of Elvanol® (e.g. storage silos) refer to Elvanol® Bulk Storage and Handling Safety Guide.

Elvanol® may be disposed of by incineration or landfill. However, any disposal method must be in compliance with all applicable local, state and federal regulations.

EFFECT OF CONCENTRATION ON VISCOSITY OF ELVANOL® 85-82



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This publication is not to be taken as a license to operate under, or recommendation to infringe, any patents. CAUTION: Do not use in medical applications involving permanent implantation in the human body. For other medical applications, see Kuraray Medical Caution Statement, H-50102.